

ABSTRACT OF THE DISCLOSURE

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In a wavelength division multiplexed (WDM) optical communication system having optical transmitters and receivers communicating via a optical channels, the bit error rate (BER) for the optical channels is tested simultaneously by performing a BER measurement for the cascaded chain. A BER test signal is supplied from a BER tester to a first optical transmitter. The BER test signal passes through the optical channels. The last optical receiver in the cascaded chain supplies the test signal to the BER tester measure the BER. The measured BER is compared to a predetermined system BER threshold to determine if the optical channels meet their specified BER values. Each optical transmitter and receiver includes a performance monitoring circuit that monitors the quality of the BER signal supplied to the optical transmitter/receiver for identifying one or more optical channels that the measured BER exceeds a predetermined system BER threshold.